QUARTERLY

OF

APPLIED MATHEMATICS

EDITED BY

H. T. BANKS
G. F. CARRIER
H. COHEN
J. D. COWAN
P. J. DAVIS
D. C. DRUCKER
H. W. EMMONS
C. FERRARI
P. GERMAIN
U. GRENANDER
G. E. HAY
P. LE CORBEILLER
J. R. RICE
W. R. SEARS
J. G. SIMMONDS
L. SIROVICH
M. SLEMROD
P. S. SYMONDS

WALTER FREIBERGER
Managing Editor

CONSTANTINE DAFERMOS
Associate Managing Editor

FOUNDER, AND
MANAGING EDITOR 1943–1965
W. PRAGER

VOLUME LIV 1996

ANNUAL INDEX

Aczél, János; Rote, Günter; and Schwaiger, Jens. *Webs, iteration groups, and equivalent changes in probabilities*, 475

Angenent, Sigurd and Gurtin, Morton E. *General contact-angle conditions with and without kinetics*, 557

Atadan, A. S. *A variation of the intrinsic multiple-scale harmonic balance method*, 401

Balendran, B. and Nemat-Nasser, Sia. *Derivative of a function of a nonsymmetric second-order tensor*, 583

Banks, H. T.; Propst, G.; and Silcox, R. J. *A comparison of time domain boundary conditions for acoustic waves in wave guides*, 249

Berrone, Lucio R. *Temporary range of validity for some mathematical models which involve the heat-diffusion equation*, 1

Bloom, Frederick and Hao, Wenge. *Inertial manifolds of incompressible, nonlinear bipolar viscous fluids*, 501

Bosello, Carlo Alberto and Gentili, Giorgio. *Some quasi-static problems with elastic and viscous boundary conditions in linear viscoelasticity*, 687

Brandon, Deborah and Rogers, Robert C. *Analysis of a rigid ferromagnetic body under applied magnetic fields*, 267

Bush, J. W. M. *See* Stone, H. A.

Campbell, L. L. *See* Mansourati, Z. G.

Cazenave, Thierry and Weissler, Fred B. *Unstable simple modes of the nonlinear string*, 287

Choudhury, S. Roy and Fosser, C. *Turing bifurcation in nonlinear competition models with delay*, 33

Choudhury, S. Roy. *The initial-value problem for the Kelvin-Helmholtz instabilities of high-velocity and magnetized shear layers*, 637

Cveticanin, L. *Adiabatic invariants for strongly nonlinear dynamical systems described with complex functions*, 407

Dickey, R. W. and Roseman, Joseph J. *Symmetric and unsymmetric buckling of circular arches*, 759

Do-Nhat, T. and MacPhie, R. H. *On the accurate computation of the prolate spheroidal radial functions of the second kind*, 677

Do-Nhat, T. and MacPhie, R. H. *On the computation of Infeld's function used in evaluating the admittance of prolate spheroidal dipole antennas*, 721

Dohtani, Akitaka. *Existence and stability of business cycles*, 105

Drozdov, Aleksey D. and Gil, Michael I. *Stability of a linear integro-differential equation with periodic coefficients*, 609

Feng, De-Xing. *See* Yao, Peng-Fei

Fife, P. C. and Peletier, L. A. *On the location of defects in stationary solutions of the Ginzburg-Landau equation in* $\mathbf{R}^2$, 85

Fikioris, John G. *Electromagnetic field in the source region of continuously varying current density*, 201

Fosdick, Roger L. and Mason, Darren E. *Single phase energy minimizers for materials with nonlocal spatial dependence*, 161

Fosser, C. *See* Choudhury, S. Roy

Fried, Eliot and Gurtin, Morton E. *Semi-quadratic variational problems for multiphase equilibria*, 73

Garbey, M.; Taik, A.; and Volpert, V. *Linear stability analysis of reaction fronts in liquids*, 225

Gentili, Giorgio. *See* Bosello, Carlo Alberto

Giga, Yoshikazu and Gurtin, Morton E. *A comparison theorem for crystalline evolution in the plane*, 727

Gil, Michael I. *See* Drozdov, Aleksey D.

Gurtin, Morton E. *See* Angenent, Sigurd

Gurtin, Morton E. *See* Fried, Eliot

Gurtin, Morton E. *See* Giga, Yoshikazu

Hanson, Mark T. and Puja, Igusti W. *Love's circular patch problem revisited: Closed form solutions for transverse isotropy and shear loading*, 359

Hao, Wenge. *See* Bloom, Frederick

Hatfield, Gary A. *Conservation laws and canonical forms in the Stroh formalism of anisotropic elasticity*, 739

Hilgers, M. G. and Pipkin, A. C. *Bending energy of highly elastic membranes II*, 307
Hoo Fatt, M. S. *See* Mihăilescu-Suliciu, M.
Horgan, C. O. *See* Polignone, D. A.
Lerche, I. *An inverse method for determining parameters for folded structures*, 625
Liu, Zhuangyi and Zheng, Songmu. *On the exponential stability of linear viscoelasticity and thermoviscoelasticity*, 21
MacPhie, R. H. *See* Do-Nhat, T.
Man, Chi-Sing and Schanding, Jeffrey B. *Differentiability of the scalar coefficients in two representation formulae for isotropic tensor functions in two dimensions*, 121
Mansourati, Z. G. and Campbell, L. L. *Non-classical diffusion equations related to birth-death processes with two boundaries*, 423
Martin, P. A. *Mapping flat cracks onto penny-shaped cracks, with application to somewhat circular tensile cracks*, 663
Mason, Darren E. *See* Fosdick, Roger L.
Mihăilescu-Suliciu, M.; Suliciu, I.; Wierzbicki, T.; and Hoo Fatt, M. S. *Transient response of an impulsively loaded plastic string on a plastic foundation*, 327
Musielak, Z. E. *See* Nerney, Steven
Nemat-Nasser, Sia. *See* Balendran, B.
Nerney, Steven; Schmahl, Edward J.; and Musielak, Z. E. *Analytic solutions of the vector Burgers' equation*, 63
Nerney, Steven; Schmahl, Edward J.; and Musielak, Z. E. *Limits to extensions of Burgers' equation*, 385
Olmstead, W. E. *See* Roberts, Catherine A.
Ostrov, Daniel N. *Boundary conditions for chromatography reactors in a state of maximum mixedness*, 571
Pascal, H. *See* Pascal, J. P.
Pascal, J. P. and Pascal, H. *Similarity solutions to rotating Couette flow of non-Newtonian fluids in the presence of a magnetic field*, 345
Peletier, L. A. *See* Fife, P. C.
Peszek, Robert. *Instability and stability of numerical approximations to discrete velocity models of the Boltzmann equation*, 777
Petersson, J. *On stiffness maximization of variable thickness sheet with unilateral contact*, 541
Pipkin, A. C. *See* Hilgers, M. G.
Polignone, D. A. and Horgan, C. O. *Errata: Pure azimuthal shear of compressible nonlinearly elastic circular tubes*, 395
Polignone, Debra A. *See* Warne, Paul G.
Propst, G. *See* Banks, H. T.
Puja, Igusti W. *See* Hanson, Mark T.
Rhodes-Robinson, P. F. *On the forced surface waves due to a partially immersed vertical wavemaker in water of infinite depth*, 709
Roberts, Catherine A. and Olmstead, W. E. *Growth rates for blow-up solutions of nonlinear Volterra equations*, 153
Rogers, Robert C. *See* Brandon, Deborah
Roseman, Joseph J. *See* Dickey, R. W.
Rote, Günter. *See* Aczél, János
Ruan, W. H. *A reaction-diffusion system arising in population genetics*, 133
Saxton, K. *Global existence and singularity formation in solutions of a modified Fourier law*, 697
Schanding, Jeffrey B. *See* Man, Chi-Sing
Schmahl, Edward J. *See* Nerney, Steven
Schwaiger, Jens. *See* Aczél, János
Silcox, R. J. *See* Banks, H. T.
Srinivasan, Radhakrishnan. *Unsteady asymptotic solutions of the two-dimensional Euler equations*, 211
Stone, H. A. and Bush, J. W. M. *Time-dependent drop deformation in a rotating high viscosity fluid*, 551
Suliciu, I. *See* Mihăilescu-Suliciu, M.
Taik, A. *See* Garbey, M.

Treskov, S. A. and Volokitin, E. P. *On existence of periodic orbits for the FitzHugh nerve system*, 601
Volokitin, E. P. *See* Treskov, S. A.
Volpert, V. *See* Garbey, M.
Warne, Paul G. and Polignone, Debra A. *Solutions for an infinite compressible nonlinearly elastic body under a line load*, 317
Weissler, Fred B. *See* Cazenave, Thierry
Wierzbicki, T. *See* Mihăilescu-Suliciu, M.
Yao, Peng-Fei. *On the dual boundary conditions of the fourth derivative operators*, 445
Yao, Peng-Fei and Feng, De-Xing. *Structure for nonnegative square roots of unbounded nonnegative selfadjoint operators*, 457
Zheng, Songmu. *See* Liu, Zhuangyi